



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/802,008	03/16/2004	Leo M. Pedlow JR.	SNY-T5717.02	3326

24337 7590 04/07/2009
MILLER PATENT SERVICES
2500 DOCKERY LANE
RALEIGH, NC 27606

EXAMINER

HENNING, MATTHEW T

ART UNIT	PAPER NUMBER
----------	--------------

2431

MAIL DATE	DELIVERY MODE
-----------	---------------

04/07/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/802,008	Applicant(s) PEDLOW ET AL.	
	Examiner MATTHEW T. HENNING	Art Unit 2431	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10, 12, 13, 18-23, 25, 27-34 and 37-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 12, 13, 18-23, 25, 27-34 and 37-41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1 This action is in response to the communication filed on 12/22/2008.

2 **DETAILED ACTION**

3 Claims 1-10, 12, 13, 18-23, 25, 27-34 and 37-41 have been examined.

4 ***Response to Arguments***

5 Applicants' arguments filed 12/22/2008 have been fully considered but they are not
6 persuasive. The arguments pertaining to the newly amended claims have not been addressed
7 here, as the new limitations have been addressed in the rejections below.

8 Regarding the applicants' request for evidence of obviousness for claims 18 and 19, the
9 applicants are directed to US Patents 5,905,732 and 6,064,676 respectively, which show that the
10 features of claims 18 and 19 were known and obvious in the art. As such, the examiner does not
11 find the arguments persuasive.

12 All objections and rejections not set forth below have been withdrawn.

13
14 ***Information Disclosure Statement***

15 The information disclosure statement(s) (IDS) submitted prior to this office action are in
16 compliance with the provisions of 37 CFR 1.97. Accordingly, the examiner is considering the
17 information disclosure statements. The examiner respectfully requests that the applicants refrain
18 from submitting further Information Disclosure Statements which include references that have
19 already been cited in this application, as they will not be considered again, and this places a
20 further unnecessary burden on the examiner to determine which references have and have not
21 been previously cited in the application.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1-2, 7, 8, 12, 18-20, 29-30, 34, and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Unger et al. (US Patent Application Publication 2003/0026423) hereinafter referred to as Unger, and further in view of Colligan et al. (US Patent Number 6,415,031) hereinafter referred to as Colligan.

Regarding claims 1 and 29, Unger disclosed a method of pre-processing content in a video on demand (VOD) system [See Unger Abstract], wherein the content is identified by a first set of packet identifiers (PIDs) (Primary PID and Secondary PID), the method comprising: receiving content (See Unger Paragraph 0064), the content having packets that are to be encrypted by a first encryption system (See Unger Paragraph 0138); selecting packets in the content according to a selective encryption selection criterion to produce selected packets (See Unger Paragraph 0064); duplicating the selected packets to produce duplicate copies of the original packets (See Unger Paragraph 0064); identifying the duplicate copies using a second set of PIDs (See Unger Paragraph 0064: Primary PID and Secondary PID); inserting the duplicate copies of the original packets identified by the second set of PIDs into the content (See Unger

Paragraph 0064), encrypting the content having identifiable duplicate selected packets using the first encryption system (Unger Paragraph 0064); storing the encrypted content having the identifiable duplicate selected packets and the duplicate copies at a VOD server (Unger Paragraph 0064, wherein it was inherent that the content and duplicate copies were stored, at least temporarily, in order for the processing of the content to have occurred as disclosed by Unger; further see Paragraph 146 wherein it is disclosed that this is a VOD system); a device that uses a second encryption system (Unger Fig. 6 element 336); stripping out the encrypted content having the identifiable duplicate selected packets (Unger Paragraph 0065); and encrypting the duplicate copies using the second encryption system (Unger Paragraph 0064), but Unger failed to specifically disclose that the packets that are to be encrypted being marked by a set encryption flag for all packets designated to be encrypted, and clearing all encryption flags in the content except for the selected packets having the first set of PIDs, thereby producing content having identifiable duplicate selected packets suitable for selective encryption; or that the encryption and stripping processing was in response to a request for the content from the device that uses a second encryption system. Unger did, however, disclose that the packets, at least once encrypted, had a set of flags indicating whether they were encrypted or not (See Unger Paragraph 0138).

Colligan teaches that in a video on demand system, wherein less than all packets are to be encrypted, the packets to be encrypted should be marked using scramble control flags in order to tell the encryptor which packets to encrypt [Colligan Col. 11 Lines 31-57].

It would have been obvious to the ordinary person skilled in the art at the time of invention to employ the teachings of Colligan in the content packet encryption system of Unger

Art Unit: 2431

1 by setting a scramble control flag in each packet to be encrypted. This would have been obvious
2 because the ordinary person skilled in the art would have been motivated to provide a way for
3 the encryptor to tell which packets to encrypt. In this combination, it further would have been
4 obvious to clear the flag of all packets which are not to be encrypted. This would have been
5 obvious because the ordinary person skilled in the art would have been motivated to indicate that
6 these packets are not to be encrypted by the encryptor.

7 It was also well known in the art at the time of invention that VOD systems receive
8 requests for content, and in response the content is encrypted, transmitted to the requestor. As
9 such, it would have been obvious to the ordinary person skilled in the art at the time of invention
10 to have transmitted a request for content to the Cable Head End, at which point the Head End
11 would encrypt the content as disclosed in Paragraph 0064 of Unger, transmit the content to the
12 requestor, and the requestor would strip out the encrypted content as disclosed in Paragraph
13 0065. This would have been obvious because the ordinary person skilled in the art would have
14 been motivated to enable the VOD (video on **demand**) system to function at the user's request.

15 Regarding claims 2 and 30, Unger and Colligan taught that the encryption flag is encoded
16 using transport_scrambling_control data bits [See Colligan Col. 11 Lines 31-57].

17 Regarding claims 7-8 and 34, Unger and Colligan taught generating a program
18 association table (PAT) and a program map table (PMT) identifying the second set of PIDs, and
19 storing the PAT, the PMT, and the content on a VOD server [See Unger Paragraphs 0048-0063
20 and associated tables].

21 Regarding claim 18, although Unger and Colligan did not specifically teach adjusting a
22 program clock reference (PCR) in packets containing adaptation fields to account for insertion of

1 the duplicate copies, it well known in the art at the time of invention that MPEG streams have a
2 required PCR and that multiplexing streams can cause delays in the timing, which is solved by
3 re-stamping the packets with an adjusted PCR. Therefore, it would have been obvious to the
4 ordinary person skilled in the art at the time of invention that inserting duplicate packets into the
5 packet stream would require adjustment of the PCR. This would have been obvious because the
6 ordinary person skilled in the art would have been motivated to correct the PCR according to any
7 delay in transmission produced by the multiplexing of the duplicated packets. This is further
8 evidenced by US Patent Number 5,905,732.

9 Regarding claim 19, while Unger and Colligan taught that NULL packets were inserted
10 into the packet stream to fill unused bandwidth (Unger Paragraph 0010), Unger and Colligan did
11 not specifically disclose deleting NULL packets from the content stream. However, it would
12 have been obvious to the ordinary person skilled in the art at the time of invention to have
13 deleted NULL packets for the amount of bandwidth used by the newly added duplicate packets.
14 This would have been obvious because the ordinary person skilled in the art would have been
15 motivated to maintain the proper bandwidth usage. This is further evidenced by US Patent
16 Number 6,064,676.

17 Regarding claims 12 and 20, Unger and Colligan disclosed that the selecting, duplicating,
18 identifying, inserting and clearing and first encrypting functions are carried out in an offline
19 selective encryption processor (OSEP) [See Unger Fig. 12].

20 Regarding claim 37, Unger and Colligan disclosed where the add/drop re-multiplexer is
21 further configured to delete either the selected packets or the duplicate copies depending upon a
22 target receiver's decryption capability [See Unger Paragraph 0065].

1 Claims 3-6, 9, 10, 13, 21-23, 25, 27, 28, 31-33, and 38-41 are rejected under 35
2 U.S.C. 103(a) as being unpatentable over the combination of Unger and Colligan as applied to
3 claim 1 above, and further in view of Sezer et al. (US Patent Application Publication
4 2003/0118243) hereinafter referred to as Sezer.

5 Unger and Colligan taught the selective encryption system as claimed, but failed to
6 discuss trick play.

7 Sezer, on the other hand, teaches the use of trick plays in a video on demand system
8 including identifying packets of content file used in trick play modes (See Sezer Paragraphs
9 0158-0159), and creating forward and reverse trick mode content fields and forward and reverse
10 trick mode index tables (See Sezer Paragraphs 0156-0157), modifying the forward and reverse
11 trick mode index tables to account for insertion of the duplicate copies (See Sezer Paragraphs
12 0158-0159), wherein the packets of the content used in trick play modes comprise intra-coded
13 frames (See Sezer Paragraph 0081), and storing the forward and reverse trick mode files, the
14 forward and reverse trick mode index tables on the VOD server (See Sezer Paragraphs 0156-
15 0159), and smoothing trick mode transition recovery by skipping certain packets following intra-
16 coded frames using dynamic substitution (Sezer Paragraph 0083)..

17 It would have been obvious to the ordinary person skilled in the art at the time of
18 invention to employ the teachings of Sezer in the VOD system of Unger and Colligan by
19 including the teachings regarding trick modes in the VOD system. This would have been
20 obvious because the ordinary person skilled in the art would have been motivated to provide the
21 user of the VOD system with the flexibility of trick play.

22

Conclusion

Claims 1-10, 12, 13, 18-23, 25, 27-34 and 37-41 have been rejected.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MATTHEW T. HENNING whose telephone number is (571)272-3790. The examiner can normally be reached on M-F 8-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on (571) 272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2431

1 Information regarding the status of an application may be obtained from the Patent
2 Application Information Retrieval (PAIR) system. Status information for published applications
3 may be obtained from either Private PAIR or Public PAIR. Status information for unpublished
4 applications is available through Private PAIR only. For more information about the PAIR
5 system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR
6 system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would
7 like assistance from a USPTO Customer Service Representative or access to the automated
8 information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

9
10
11 /Matthew T Henning/
12 Examiner, Art Unit 2431
13 /Ayaz R. Sheikh/
14 Supervisory Patent Examiner, Art Unit 2431